

STATEMENT OF BASIS for Cinnamon Bay Corp & Edgeboro Disposal Inc.

TITLE V OPERATING PERMIT SIGNIFICANT MODIFICATION

Program Interest (PI): 17901 / Permit Activity Number: BOP170001

I. FACILITY INFORMATION

Cinnamon Bay Corp & Edgeboro Disposal Inc. is located at 3 Brick Plant Road, East Brunswick Twp., NJ 08816, Middlesex County and consists of a landfill and a landfill gas to energy facility. The facility is owned and is operated by Cinnamon Bay, LLC and Edgeboro Disposal, Inc.

The facility is classified as a major facility based on its potential to emit 62.51 tons per year of volatile organic compounds, 33.61 tons per year of nitrogen oxides, and 212.62 tons per year of carbon monoxide.

It is also classified as a major hazardous air pollutant (HAP) facility. A HAP emitting facility is designated as major when the allowed emissions exceed 10 tons per year of any individual hazardous air pollutant or 25 tons per year of any combination of individual hazardous air pollutants that may be emitted simultaneously.

This permit allows individual hazardous air pollutants to be emitted at a rate not to exceed 31.93 tons per year of formaldehyde.

VOC emissions are being corrected to include formaldehyde emissions previously not accounted for. This emission increase is meant to capture emissions already present and no new actual emissions are being generated. As a result, the Department is not revisiting the applicability of State of The Art (N.J.A.C. 7:27-22.35) and Federal New Source Review (40 CFR 52.21-PSD and N.J.A.C. 7:27-18).

II. AREA ATTAINMENT CLASSIFICATION

The Federal Clean Air Act (CAA) sets National Ambient Air Quality Standards (NAAQS) for six common air pollutants. These commonly found air pollutants (also known as "criteria pollutants") are particulate matter, ground-level ozone, carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), and lead. The US Environmental Protection Agency (USEPA) also classifies areas as "attainment" or "nonattainment" for each criteria pollutant, based on the magnitude of an area's problem. Nonattainment classifications are used to specify what air pollution reduction measures an area must adopt, and when the area must reach attainment. Currently, the entire State of New Jersey is designated as nonattainment for the 8-hour ozone NAAQS. New Jersey is designated attainment for all other pollutants. For nonattainment classification refer to <https://www.epa.gov/green-book/green-book-national-area-and-county-level-multi-pollutant-information>.

III. BACKGROUND AND HISTORY

The equipment that emits air contaminants from this facility include six landfill gas fired stationary reciprocating engines, a landfill controlled by enclosed and candlestick flares, and a #2 fuel fired emergency generator.

Health Risk Assessment was conducted as part of the review of this permit application and health risk was determined to be negligible consistent with NJDEP Technical Manual 1003.

This is a Permit Modification and includes the following changes:

1. Removed the oxidation catalysts installed on the six landfill gas engines in Emission Unit U1;
2. Reduced the total operating hour basis from 52,560 hr/yr to 26,280 hr/yr for the six landfill gas engines and two enclosed flares in Group GR1;
3. Removed all requirements and compliance schedules in U1 OS1-6 associated with an Administrative Consent Order; and
4. Added PM-2.5 emissions for the six landfill gas engines and two enclosed flares in GR1 in accordance with NJDEP policy.
5. Removed the requirement to secure and purchase 69 tons of NO_x emission offsets from GR1. The facility was required to obtain the emission offsets due to triggering Subchapter 18 applicability for NO_x in activity BOP100001. The facility secured and purchased the required offsets on May 31, 2011 and has satisfied the provisions of the requirement.

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Allowable Emission Limits	Facility's Potential Emissions (tons per year)*									
	VOC (total)	NO _x	CO	SO ₂	TSP (total)	PM ₁₀ (total)	PM _{2.5} (total)	Pb	HAPs (total)	CO _{2e} (total)
Current Permit	26.47	75.17	123.04	14.41	14.76	14.76	N/A	N/A	15.40	N/A
Proposed Permit	62.51	33.61	212.62	7.04	11.29	11.29	10.95	N/A	31.93	73,412
Change (+ / -)	+36.04	-41.56	+89.58	-7.37	-3.47	-3.47	+10.95	N/A	+16.53	+73,412

VOC Volatile Organic Compounds

NO_x Nitrogen Oxides

CO Carbon Monoxide

SO₂ Sulfur Dioxide

TSP Total Suspended Particulates

PM₁₀ Particulates under 10 microns

PM_{2.5} Particulates under 2.5 microns

Pb Lead

HAPs Hazardous Air Pollutants

CO_{2e} Carbon Dioxide equivalent

* Other Any other air contaminant regulated under the Federal Clean Air Act. This permit does not contain any air pollutants under this category.

IV. CASE-BY-CASE DETERMINATIONS

This modification is subject to State of the Art (SOTA) pursuant to N.J.A.C. 7:27-22.35 for VOC, NO_x, CO, and Formaldehyde. The case by case SOTA analyses determined Pollution Prevention – Good Combustion Practice as the control measure for each contaminant.

V. EMISSION OFFSET REQUIREMENTS

This modification is not subject to Emission Offset requirements.

VI. BASIS FOR MONITORING AND RECORDKEEPING REQUIREMENTS

The facility's operating permit includes monitoring, recordkeeping and reporting requirements that are sufficient to demonstrate the facility's continued compliance with the applicable requirements consistent with the following:

- Provisions to implement the testing and monitoring requirements of N.J.A.C. 7:27-22.18, the recordkeeping and reporting requirements of N.J.A.C. 7:27-22.19, and all emissions monitoring and analysis procedures or compliance assurance methods required under the applicable requirements, including any procedures and methods promulgated pursuant to 40 CFR 64; and
- Where the applicable requirement does not require direct periodic monitoring of emissions, the Department requires periodic monitoring of surrogate parameters sufficient to yield reliable data from the relevant time period that are representative of the facility's compliance with the permit.

For the engines and flares in Emission Units U1 and U2, the facility monitors the annual landfill gas usage (MMBTU/yr) and hours of operation (hr/yr) as surrogates for the long-term (TPY) emission limits for VOC, NO_x, CO, SO₂, TSP, PM-10, PM-2.5, HAPs (Total), and Formaldehyde.

- In some cases, direct periodic monitoring of emissions and/or surrogate parameters is not required due to one or more of the following:
 - Equipment size and capacity limitations,
 - Subject equipment being permitted at the maximum rated capacity,
 - There is no specific state or Federal standard that applies to this piece of equipment,
 - Not a pollutant of concern for this piece of equipment,
 - Agreements with EPA on the frequency of testing and monitoring for combustion sources.

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VII. APPLICABLE STATE AND FEDERAL RULES

This modification is subject to New Jersey Air Pollution Control Regulations, codified in N.J.A.C. 7:27-1 through 34, as applicable. A complete text of these regulations is available at:

<http://www.nj.gov/dep/aqm/rules27.html>

This modification is also subject to Federal regulations listed below.

NSPS Subpart A: General Provisions

NSPS Subpart JJJJ: Stationary Spark Ignition Internal Combustion Engines

The Greenhouse Gas (GHG) emissions from this facility are 73,412 TPY CO₂e. This modification is not subject to PSD rules at 40 CFR 52.21.

VIII. FACILITY'S COMPLIANCE STATUS

The Responsible Official at the facility has certified that the facility currently meets all applicable requirements of the Federal Clean Air Act and the New Jersey Air Pollution Control Act. Based on this certification, the Department's evaluation of the information included in the facility's application, and a review of the facility's compliance status, the Department has concluded that this air pollution control operating permit should be approved.

This operating permit includes a permit shield, pursuant to the provisions of N.J.A.C. 7:27-22.17. A permit shield provides that compliance with the relevant conditions of the operating permit shall be deemed compliance with the specific applicable requirements that are in effect on the date of issuance of the draft operating permit, and which form the basis for the conditions in the operating permit.

Prior to the expiration of the Operating Permit's five-year term, the facility will be required to apply for a renewal, at which time the Department will evaluate the facility and issue a public notice with its findings.

IX. EXEMPT ACTIVITIES

The facility's operating permit does not include exempt activities such as office and interior maintenance activities, maintenance shop activities, food preparation facilities, cafeterias and dining rooms, etc. A complete list of exempt activities, as allowed by the Operating Permit rule, can be found at N.J.A.C. 7:27-22.1.

FACILITY NAME (FACILITY ID NUMBER)
BOP050001

Activity Number assigned
by the Department

New Jersey Department of Environmental Protection Facility Specific Requirements

Emission Unit Number
assigned by the Facility

Brief description of
emission unit

Emission Unit: U40 Sewage Sludge Incinerators
Operating Scenario: OS Summary

OR

OS2 Fluidized Bed Incinerator

OS Summary lists all rules and requirements that apply to an emission unit. An emission unit may contain one or more pieces of equipment and corresponding operating scenarios.

OSX denotes the operating scenario number and lists the rules and requirements that apply to a scenario. An operating scenario represents various ways (or scenarios) a piece of equipment is permitted to operate.

Item
Number

Description of applicable
requirement

Monitoring method to
ensure compliance

Recordkeeping to show
facility's compliance

Actions and submittals
required for the facility

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
3	The permittee shall conduct an annual performance test for each pollutant in Table 2 of 40CFR62 Subpart LLL between 11 and 13 calendar months after the previous performance test or within 60 days of a process change. [40 CFR 62.16000(a)]	Other: Conduct the performance test using the test methods, averaging methods and minimum sampling volumes or durations as specified in 40CFR62 Subpart LLL and according to the testing, monitoring and calibration requirements specified in 40 CFR 62.16015(a). [40 CFR 62.16000(a)].	Other: (1) Maintain records of the results of initial, annual and any subsequent performance tests conducted to determine compliance with the emission limits and standards and/or to establish operating limits, as applicable. [40 CFR 62.16025(e)].	Submit a report: Annually to the Administrator and to the Department. The permittee shall submit an annual compliance report as specified in 40 CFR 62. [40 CFR 62.16000(d)]

Rule citation for
applicable requirement

Rule citation for
monitoring requirement

Rule citation for
recordkeeping requirement

Rule citation for submittal/
action requirement

Explanation Sheet for Facility Specific Requirements